

Baerlocher GmbH

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Amended Claims

1. Stabiliser composition for stabilizing halogen-containing thermoplastic resins, comprising

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(a) calcium hydroxide or calcium oxide or a mixture thereof,

(b) at least one hydroxyl-group-containing isocyanurate and

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(c) at least one β -diketone or a salt of a β -diketone or a mixture thereof,

whereas the weight content of the constituent (b) is comprised in an amount of 0,01 to 30 % by weight, based on the total weight of the stabilizer composition and whereas the weight content of the constituent (c) is less than 0,3 phr, based on the thermoplastic resin to be stabilized or the thermoplastic resins to be stabilized.

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2. Stabilizer composition according to claim 1, wherein the constituent (a) is comprised in an amount of 0,01 to 2 phr, based on the thermoplastic resin to be stabilized or the thermoplastic resins to be stabilized.

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3. Stabilizer composition according to claim 1 or 2, wherein the constituent (b) is comprised in an amount of 0,01 to 1 phr, based on the thermoplastic resin to be stabilized or the thermoplastic resins to be stabilized.

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4. Stabilizer composition according to one of the claims 1 to 3, characterized in that one or more of the following conditions are met:

- (i) the content of constituent (a) is 0,05 to 0,3299 phr, based on the thermoplastic resin to be stabilized or the thermoplastic resins to be stabilized,
- 5 (ii) the content of constituent (b) is 0,05 to 0,299 phr, based on the thermoplastic resin to be stabilized or the thermoplastic resins to be stabilized,
- 10 (iii) the content of constituent (c) is 0,01 to 0,3 phr, based on the thermoplastic resin to be stabilized or the thermoplastic resins to be stabilized.
5. Stabilizer composition according to one of the claims 1 to 4, characterized in that the stabilizer composition comprises calcium acetylacetonate or zinc acetylacetonate or a mixture thereof in an amount of 0,001 to 0,3 phr, based on the thermoplastic resins to be stabilized.
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6. Stabilizer composition for stabilizing halogen-containing thermoplastic resins, comprising
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- (a) calcium hydroxide or calcium oxide or a mixture thereof,
- (b) at least one hydroxyl-group-containing isocyanurate and
- 25 (c) at least one β -diketone or a salt of a β -diketone or a mixture thereof,

whereas the weight content of the constituent (b) is comprised in an amount of 0,01 to 30 % by weight, based on the total amount of the stabilizer composition and whereas the weight content of the constituent (c) is

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in a range of 0,01 to 1,728 % by weight, based on the total weight of the stabilizer composition.

- 5 7. Stabilizer composition according to claim 6, wherein the constituent (a) is comprised in an amount of 0,01 to 30 % by weight, based on the total weight of the stabilizer composition.
8. Stabilizer composition according to one of claims 6 to 7, characterized in that one or more of the following conditions are met:
- 10 (i) the content of constituent (a) is 0,15 to 5 % by weight, based on the total weight of the stabilizer composition,
- 15 (ii) the content of constituent (b) is 0,1 to 5 % by weight, based on the total weight of the stabilizer composition,
- (iii) the content of constituent (c) is 0,05 to 5 % by weight, based on the total weight of the stabilizer composition.
- 20 9. Stabilizer composition according to one of the claims 6 to 8, characterized in that the stabilizer composition comprises calcium acetylacetonate or zinc acetylacetonate or a mixture thereof in an amount of 0,001 to 10 % by weight, based on the total weight of the stabilizer composition.
- 25 10. Stabilizer composition according to one of the claims 1 to 9, wherein the hydroxyl-group-containing isocyanurate is selected from compounds of the general formula (I)



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and as polymer

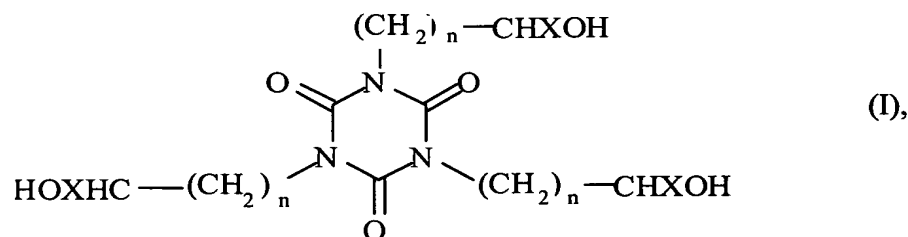
- (d) a halogen-containing thermoplastic resin or a mixture of two or more halogen-containing thermoplastic resins

is comprised and whereas the weight content of the constituent (b) is comprised in an amount of 0,01 to 30 % by weight, based on the total weight of the stabilizer composition and whereas the weight content of the constituent (c) is less than 0,3 phr, based on the thermoplastic resin to be stabilized or the thermoplastic resins to be stabilized.

15. Polymer composition according to claim 14, characterized in that the constituent (a) is comprised in an amount of 0,01 to 2 phr, based on the halogen-containing resin.

16. Polymer composition according to one of the claims 14 or 15, characterized in that the constituent (b) is comprised in an amount of 0,01 to 1 parts by weight, based on the halogen-containing resin.

17. Polymer composition according to one of the claims 14 to 16, characterized in that the hydroxyl-group-containing isocyanurate is selected from compounds of the general formula (I)



wherein the groups X and the indices n are identical or different and n is an integer of 0 to 5 and X is a hydrogen atom or a linear or branched alkyl group having 1 to 6 carbon atoms.

- 5 18. Polymer composition according to one of the claims 14 to 17, characterized in that one or more of the following conditions are met:

(i) the content of constituent (a) is 0,05 to 0,3299 phr, based on the thermoplastic resins to be stabilized,

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(ii) the content of constituent (b) is 0,05 to 0,299 phr, based on the thermoplastic resins to be stabilized,

(iii) the content of constituent (c) is 0,01 to 0,3 phr, based on the thermoplastic resins to be stabilized.

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19. Polymer composition according to one of claims 14 to 18, characterized in that it comprises a hydrotalcite or a mixture of two or more hydrotalcites.

- 20 20. Polymer composition according to one of the claims 14 to 19, characterized in that it comprises a mixture of zinc stearate and at least one further organic zinc salt.

21. Polymer composition according to one of the claims 14 to 20, characterized in that it comprises calcium acetylacetonate or zinc acetylacetonate or a mixture thereof in an amount of 0,001 to 0,3 phr, based on the thermoplastic resin to be stabilized or the thermoplastic resins to be stabilized.

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22. Polymer composition according to one of claims 14 to 21, characterized in that it comprises a triglyceride.

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23. Process for the preparation of a stabilizer composition for stabilizing halogen-containing thermoplastic resins, in which

- 5 (a) calcium hydroxide or calcium oxide or a mixture thereof,
- (b) at least one hydroxyl-group-containing isocyanurate and
- 10 (c) at least one β -diketone or a salt of a β -diketone or a mixture thereof,

is mixed, whereas the weight content of the constituent (b) is comprised in an amount of 0,01 to 30 % by weight, based on the total weight of the stabilizer composition, and whereas the weight content of the constituent (c) is less than 0,3 phr, based on the thermoplastic resin to be stabilized or the thermoplastic resins to be stabilized.

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24. Process for the preparation of a stabilizer composition for stabilizing halogen-containing thermoplastic resins, in which

- 20 (a) calcium hydroxide or calcium oxide or a mixture thereof,
- (b) at least one hydroxyl-group-containing isocyanurate and
- 25 (c) at least one β -diketone or a salt of a β -diketone or a mixture thereof,

is mixed together, whereas the weight content of the constituent (b) is comprised in an amount of 0,01 to 30 % by weight, based on the total weight of the stabilizer composition, and whereas the weight content of the

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constituent (c) is in a range of 0,01 to 1,728 % by weight, based on the total weight of the stabilizer composition.

25. Process for the preparation of a polymer composition, comprising a stabilizer composition and at least one polymer, in which at least

- (a) calcium hydroxide or calcium oxide or a mixture thereof,
- (b) at least one hydroxyl-group-containing isocyanurate,
- (c) at least one β -diketone or a salt of a β -diketone or a mixture thereof and
- (d) a halogen-containing thermoplastic resin or a mixture of two or more halogen-containing thermoplastic resins

is mixed, whereas the weight content of the constituent (b) is comprised in an amount of 0,01 to 30 % by weight, based on the total weight of the stabilizer composition, and whereas the weight content of the constituent (c) is less than 0,3 phr, based on the thermoplastic resin to be stabilized or the thermoplastic resins to be stabilized.

26. Process for stabilizing a halogen-containing thermoplastic resin or a mixture of two or more halogen-containing thermoplastic resins, in which a stabilizer composition and at least one halogen-containing thermoplastic polymer are mixed, whereas the stabilizer composition comprises at least

- (a) calcium hydroxide or calcium oxide or a mixture thereof,
- (b) at least one hydroxyl-group-containing isocyanurate,

- (c) at least one β -diketone or a salt of a β -diketone or a mixture thereof

5 whereas the weight content of the constituent (b) is comprised in an amount of 0,01 to 30 % by weight, based on the total weight of the stabilizer composition, and whereas the weight content of the constituent (c) is less than 0,3 phr, based on the thermoplastic resin to be stabilized or the thermoplastic resins to be stabilized.

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27. Use of a stabilizer composition for stabilizing a halogen-containing thermoplastic resin or a mixture of two or more halogen-containing thermoplastic resins, whereas the stabilizer composition comprises at least

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- (a) calcium hydroxide or calcium oxide or a mixture thereof,

- (b) at least one hydroxyl-group-containing isocyanurate,

- (c) at least one β -diketone or a salt of a β -diketone or a mixture thereof,

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25 whereas the weight content of the constituent (b) is comprised in an amount of 0,01 to 30 % by weight, based on the total weight of the stabilizer composition, and whereas the weight content of the constituent (c) is less than 0,3 phr, based on the thermoplastic resin to be stabilized or the thermoplastic resins to be stabilized.

28. Use of a stabilizer composition for stabilizing a halogen-containing thermoplastic resin or a mixture of two or more halogen-containing thermoplastic resins, whereas the stabilizer composition comprises at least

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- (a) calcium hydroxide or calcium oxide or a mixture thereof,
- (b) at least one hydroxyl-group-containing isocyanurate and
- (c) at least one β -diketone or a salt of a β -diketone or a mixture thereof,

whereas the weight content of the constituent (b) is comprised in an amount of 0,01 to 30 % by weight, based on the total weight of the stabilizer composition, and whereas the weight content of the constituent (c) is in a range of 0.01 to 1,728 % by weight, based on the total weight of the stabilizer composition.